

IN THE CLAIMS

1. (previously presented) A method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio using a computer coupled to a database, said method comprising the steps of:

segmenting the portfolio of assets into at least two valuation portions including a first valuation portion and a second valuation portion;

fully underwriting each asset individually included within the first valuation portion of the asset portfolio, or grouping and underwriting a sample of assets included within the first valuation portion of the asset portfolio;

receiving a computed value for each asset included within the first valuation portion of the asset portfolio, said computed value corresponding to the fully underwriting of each asset included within the first valuation portion, or the grouping and underwriting of a sample of assets included within the first valuation portion, wherein the valuation computation is performed by the computer;

storing in the database asset data including the computed value and descriptive attribute variables for each asset included within the first valuation portion;

statistically inferring, using the computer, a value for each asset included within the second valuation portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second valuation portion and asset data acquired from analyzing the first valuation portion of the asset portfolio including the computed value of each asset included with the first valuation portion, the correlation process including the steps of:

identifying at least two descriptive attribute variables for assets included within the second valuation portion of the portfolio and correlating said identified attribute variables with descriptive attribute variables stored in the database for assets included within the first valuation portion of the portfolio;

calculating a value of a response variable for each asset included within the second valuation portion based on the asset data assigned to assets included

within the first valuation portion which have descriptive attribute variables that correlate with the identified descriptive attribute variables, wherein the response variable represents a confidence level that the at least two identified descriptive attribute variables correlate to an accurate value of the corresponding asset;

grouping the assets included within the second valuation portion according to the calculated value of the response variable;

outputting the groupings for further analysis; and

selecting the at least two descriptive attribute variables having the highest confidence level for performing the statistical inference and valuing the assets included within the second valuation portion of the asset portfolio; and

determining a value of the portfolio of assets based on the computed value for each asset included within the first valuation portion and the inferred value of each asset included in the second valuation portion.

2. (previously presented) A method according to Claim 1 wherein said step of identifying at least two descriptive attribute variables further comprises the step of determining if the variable type is continuous or categorical.

3. (previously presented) A method according to Claim 2 wherein said step of calculating a value of a response variable further comprises the steps of:

computing an average value of a response variable for each of all combinations of the at least two identified descriptive attribute variables, wherein the at least two identified descriptive attribute variables include at least one of a continuous variable type and a categorical variable type; and

storing in the database the average value for each of all combinations of the at least two identified descriptive attribute variables.

4. (previously presented) A method according to Claim 1 wherein said step of calculating a value of a response variable further comprises the steps of calculating an average value of a response variable for each of all combinations of the at least two identified descriptive attribute variables according to

$$Y_{r \text{ Average}} = \text{sum}(Y(x1 = a \text{ and } x2 = b)) / \text{count}(x1 = a \text{ and } x2 = b)$$

where x1 is a set of categorical variables and x2 is a set of continuous variables, and where a is a set of criteria for segmenting x1 and b is a set of criteria for segmenting x2.

5. (previously presented) A method according to Claim 1 wherein said step of grouping the assets further comprises the step of computing an average for a response variable for all combinations of identified descriptive attribute variables, and levels of the identified descriptive attribute variables.

6. (original) A method according to Claim 5 further comprising the step of computing an expected value of the response variable from a weighted value of occurrence for the separate attribute variables.

7. (currently amended) A method according to Claim 6 wherein said step of computing an expected value of the response variable further comprising the step of computing expected value according to

$$Y_{r \text{ Expected}} = \frac{[\text{sum}(Y(x1=a)) * \text{count}(x1=a) + \text{sum}(Y(x2=b)) * \text{count}(x2=b)]}{[\text{count}(x1=a) * \text{count}(x2=b)]}$$

$$Y_{r \text{ Expected}} = \frac{[\text{sum}(Y(x1=a)) * \text{count}(x1=a) + \text{sum}(Y(x2=b)) * \text{count}(x2=b)]}{[\text{count}(x1=a) + \text{count}(x2=b)]}$$

where x1 is a set of categorical variables and x2 is a set of continuous variables, and where a is a set of criteria for segmenting x1 and b is a set of criteria for segmenting x2.

8. (original) A method according to Claim 6 further comprising the step of computing a deviation of the response variable from the expected value of the response variable, where the deviation is the average value of the response variable minus the expected value.

9. (previously presented) A method according to Claim 8 wherein said step of outputting the groupings further comprises the step of outputting a graphical embodiment of the response variables including the expected values of the response variables and the deviations.

10. (previously presented) A method according to Claim 9 wherein said step of outputting a graphical embodiment further comprises the step of outputting a multi-dimensional visualization of the response variables and expected values of the response variables.

11. (previously presented) A system for correlating descriptive attributes of an asset portfolio for valuation of the assets included within the portfolio, said system comprising:

a computer configured as a server and further configured with a database of asset portfolios and to enable valuation process analytics; and

at least one client system connected to said server through a network, said server configured to:

segment the portfolio of assets into at least two valuation portions including a first valuation portion and a second valuation portion;

prompt a user to fully underwrite each asset individually included within the first valuation portion of the asset portfolio, or group and underwrite a sample of assets included within the first valuation portion of the asset portfolio;

receive a computed value for each asset included within the first valuation portion of the asset portfolio, said computed value corresponding to the fully underwriting of each asset included within the first valuation portion, or the grouping and underwriting of a sample of assets included within the first valuation portion;

store in the database asset data including the computed value and descriptive attribute variables for each asset included within the first valuation portion;

statistically infer a value for each asset included within the second valuation portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second valuation portion and asset data acquired from analyzing the first valuation portion of the asset portfolio including the computed value of each asset included with the first valuation portion, the correlation process including the steps of:

identifying at least two descriptive attribute variables for assets included within the second valuation portion of the portfolio and correlating said identified attribute variables with descriptive attribute variables stored in the database for assets included within the first valuation portion of the portfolio;

calculating a value of a response variable for each asset included within the second valuation portion based on the asset data assigned to assets included within the first valuation portion which have descriptive attribute variables that correlate with the identified descriptive attribute variables, wherein the response variable represents a confidence level that the at least two identified descriptive attribute variables correlate to an accurate value of the corresponding asset;

grouping the assets included within the second valuation portion according to the calculated value of the response variable;

outputting the groupings for further analysis; and

selecting the at least two descriptive attribute variables having the highest confidence level for performing the statistical inference and valuing the assets included within the second valuation portion of the asset portfolio; and

determine a value of the portfolio of assets based on the computed value for each asset included within the first valuation portion and the inferred value of each asset included in the second valuation portion.

12. (original) A system according to Claim 11 wherein said server configured to determine if the variable type is continuous or categorical.

13. (previously presented) A system according to Claim 12 wherein said server configured to:

compute an average value of a response variable for each of all combinations of the at least two identified descriptive attribute variables, wherein the at least two identified descriptive attribute variables include at least one of a continuous variable type and a categorical variable type; and

store in the database the average value for each of all combinations of the at least two identified descriptive attribute variables.

14. (previously presented) A system according to Claim 11 wherein said server configured to calculate an average value of a response variable for each of all combinations of the at least two identified descriptive attribute variables according to

$$Y_{r \text{ Average}} = \text{sum}(Y(x1 = a \text{ and } x2 = b)) / \text{count}(x1 = a \text{ and } x2 = b)$$

where x1 is a set of categorical variables and x2 is a set of continuous variables, and where a is a set of criteria for segmenting x1 and b is a set of criteria for segmenting x2.

15. (previously presented) A system according to Claim 11 wherein said server configured to:

compute an average for a response variable for all combinations of identified descriptive attribute variables; and

store values of the identified descriptive attribute variables.

16. (original) A system according to Claim 15 wherein said server configured to compute an expected value of the response variable from a weighted value of occurrence for the separate attribute variables.

17. (currently amended) A system according to Claim 15 wherein said server configured to compute an expected value of the response variable according to

$$Y_{r \text{ Expected}} = \frac{[\text{sum}(Y(x1=a)) * \text{count}(x1=a) + \text{sum}(Y(x2=b)) * \text{count}(x2=b)]}{[\text{count}(x1=a) * \text{count}(x2=b)]}$$

$$Y_{r \text{ Expected}} = \frac{[\text{sum}(Y(x1=a)) * \text{count}(x1=a) + \text{sum}(Y(x2=b)) * \text{count}(x2=b)]}{[\text{count}(x1=a) + \text{count}(x2=b)]}$$

where x1 is a set of categorical variables and x2 is a set of continuous variables, and where a is a set of criteria for segmenting x1 and b is a set of criteria for segmenting x2.

18. (original) A system according to Claim 16 wherein said server configured to compute a deviation of the response variable from the expected value of the response variable, where the deviation is the average value of the response variable minus the expected value.

19. (previously presented) A system according to Claim 18 wherein said server configured to display a graphical embodiment of the response variables including the expected values of the response variables and the deviations.

20. (previously presented) A system according to Claim 19 wherein said server configured to display a multi-dimensional visualization of the response variables and expected values of the response variables.

21. (previously presented) A computer for correlating descriptive attributes of an asset portfolio for valuation of the assets included within the portfolio, said computer including a database of asset portfolios, said computer programmed to:

segment the portfolio of assets into at least two valuation portions including a first valuation portion and a second valuation portion;

prompt a user to fully underwrite each asset individually included within the first valuation portion of the asset portfolio, or group and underwrite a sample of assets included within the first valuation portion of the asset portfolio;

receive a computed value for each asset included within the first valuation portion of the asset portfolio, said computed value corresponding to the fully underwriting of each asset included within the first valuation portion, or the grouping and underwriting of a sample of assets included within the first valuation portion;

store in the database asset data including the computed value and descriptive attribute variables for each asset included within the first valuation portion;

statistically infer a value for each asset included within the second valuation portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second valuation portion and asset data acquired from analyzing the first valuation portion of the asset portfolio including the computed value of

each asset included with the first valuation portion, the correlation process including the steps of:

identifying at least two descriptive attribute variables for assets included within the second valuation portion of the portfolio and correlating said identified attribute variables with descriptive attribute variables stored in the database for assets included within the first valuation portion of the portfolio;

calculating a value of a response variable for each asset included within the second valuation portion based on the asset data assigned to assets included within the first valuation portion which have descriptive attribute variables that correlate with the identified descriptive attribute variables, wherein the response variable represents a confidence level that the at least two identified descriptive attribute variables correlate to an accurate value of the corresponding asset;

grouping the assets included within the second valuation portion according to the calculated value of the response variable;

outputting the groupings for further analysis; and

selecting the at least two descriptive attribute variables having the highest confidence level for performing the statistical inference and valuing the assets included within the second valuation portion of the asset portfolio; and

determine a value of the portfolio of assets based on the computed value for each asset included within the first valuation portion and the inferred value of each asset included in the second valuation portion.

22. (original) A computer according to Claim 21 programmed to determine if the variable type is continuous or categorical.

23. (previously presented) A computer according to Claim 22 programmed to:

compute an average value of a response variable for each of all combinations of the at least two identified descriptive attribute variables, wherein the at least two identified descriptive attribute variables include at least one of a continuous variable type and a categorical variable type; and

store in the database the average value for each of all combinations of the at least two identified descriptive attribute variables.

24. (previously presented) A computer according to Claim 21 programmed to calculate an average value of a response variable for each of all for each of all combinations of the at least two identified descriptive attribute variables according to

$$Y_{Average} = \text{sum}(Y(x1 = a \text{ and } x2 = b)) / \text{count}(x1 = a \text{ and } x2 = b)$$

where x1 is a set of categorical variables and x2 is a set of continuous variables, and where a is a set of criteria for segmenting x1 and b is a set of criteria for segmenting x2.

25. (previously presented) A computer according to Claim 21 programmed to:

compute an average for a response variable for all combinations of identified descriptive attribute variables; and

store values of the identified descriptive attribute variables.

26. (original) A computer according to Claim 25 programmed to compute an expected value of the response variable from a weighted value of occurrence for the separate attribute variables.

27. (currently amended) A computer according to Claim 25 programmed to compute an expected value of the response variable according to

$$Y_{Expected} = \frac{[\text{sum}(Y(x1=a)) * \text{count}(x1=a) + \text{sum}(Y(x2=b)) * \text{count}(x2=b)]}{[\text{count}(x1=a) * \text{count}(x2=b)]}$$

$$Y_{Expected} = \frac{[\text{sum}(Y(x1=a)) * \text{count}(x1=a) + \text{sum}(Y(x2=b)) * \text{count}(x2=b)]}{[\text{count}(x1=a) + \text{count}(x2=b)]}$$

where x1 is a set of categorical variables and x2 is a set of continuous variables, and where a is a set of criteria for segmenting x1 and b is a set of criteria for segmenting x2.

28. (original) A computer according to Claim 26 programmed to compute a deviation of the response variable from the expected value of the response variable, where the deviation is the average value of the response variable minus the expected value.

29. (previously presented) A computer according to Claim 28 programmed to display a graphical embodiment of the response variables including the expected values of the response variables and the deviations.

30. (previously presented) A computer according to Claim 29 programmed to display a multi-dimensional visualization of the response variables and expected values of the response variables.

31. (previously presented) A method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio using a computer coupled to a database, said method comprising the steps of:

segmenting the portfolio of assets into three valuation portions including a first valuation portion, a second valuation portion, and a third valuation portion;

fully underwriting each asset individually included within the first valuation portion of the asset portfolio and receiving a computed value for each asset included within the first valuation portion of the asset portfolio, said computed value corresponding to the fully underwriting of each asset included within the first valuation portion, the valuation computation is performed by the computer;

grouping and underwriting a sample of assets included within the second valuation portion of the asset portfolio and receiving a computed value of each asset included within the second valuation portion, said computed value corresponding to the asset data acquired from the fully underwriting of the first valuation portion of the asset portfolio;

storing in the database asset data including the computed value and descriptive attribute variables for each asset included within the first valuation portion and the second valuation portion;

statistically inferring, using the computer, a value for each asset included within the third valuation portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the third valuation portion and the

asset data acquired from analyzing the first and second valuation portions including the computed value of each asset included with the first and second valuation portions, the correlation process including the steps of:

identifying at least two descriptive attribute variables for assets included within the third valuation portion of the portfolio and correlating said identified attribute variables with descriptive attribute variables stored in the database for assets included within the first and second valuation portions of the portfolio;

calculating a value of a response variable for each asset included within the third valuation portion based on the asset data assigned to assets included within the first and second valuation portions which have descriptive attribute variables that correlate with the identified descriptive attribute variables, wherein the response variable represents a confidence level that the at least two identified descriptive attribute variables correlate to an accurate value of the corresponding asset;

grouping the assets included within the third valuation portion according to the calculated value of the response variable;

outputting the groupings for further analysis; and

selecting the at least two descriptive attribute variables having the highest confidence level for performing the statistical inference and valuing the assets included within the third valuation portion of the asset portfolio; and

determining a value of the portfolio of assets based on the computed value for each asset included within the first and second valuation portions and the inferred value of each asset included in the third valuation portion.